

IN THE CLAIMS:

Please amend Claims 1-3 and 7-15, as indicated below. The following is a complete listing of claims and replaces all prior versions and listings of claims in the present application:

1. (currently amended) A wireless communication system ~~having~~ comprising first and second wireless communication devices, wherein

said first wireless communication device comprises:

a detection unit adapted to detect a plurality of beacons at a plurality of frequencies;

a connection unit adapted to connect to a network identified by network identification information included in a beacon detected by said detection unit to search for a wireless communication device having a predetermined data processing function specified by an operator;

a first transmission unit adapted to transmit a search request signal, to search for the wireless communication device having the predetermined data processing function specified by the operator, to a wireless device ~~that is present on [[a]] the network identified~~ connected to by said connection unit ~~network identification information included in a beacon detected by said detection unit so as to search for a wireless communication device having a predetermined data processing function;~~

a determination unit adapted to determine [[a]] whether the wireless communication device ~~having~~ on the network connected to by said connection unit has the predetermined data processing function specified by the operator on the basis of a response signal that the ~~determined~~ wireless communication device on the network connected to by said

connection unit has transmitted in response to the search request signal transmitted by said first transmission unit;

a display unit adapted to selectably display information associated with the wireless communication device determined by said determination unit to have the predetermined data processing function specified by the operator so as to determine a wireless communication partner; and

a control unit adapted to, when ~~a user~~ the operator selects the information displayed by said display unit, while said detection unit performs a detection process to detect ~~detects~~ the beacon, terminate the detection process of said detection unit and execute connection processing with a wireless communication device specified by the selected information, and

said second wireless communication device comprises:

a second transmission unit adapted to transmit a signal including self identification information as the response signal, when search request information is detected in a wireless reception waiting state at a predetermined frequency.

2. (currently amended) A wireless communication device comprising:

a detection unit adapted to detect a plurality of beacons at a plurality of frequencies;

a connection unit adapted to connect to a network identified by network identification information included in a beacon detected by said detection unit to search for a wireless communication device having a predetermined data processing function specified by an operator;

a transmission unit adapted to transmit a search request signal, to search for the wireless communication device having the predetermined data processing function specified by the operator, to a wireless communication unit's device ~~that are present~~ on ~~[[a]]~~ the network ~~identified connected to by said connection unit network identification information included in a~~

~~beacon detected by said detection unit, so as to search for a wireless communication unit having a predetermined data processing function;~~

a determination unit adapted to determine ~~[[a]]~~ whether the wireless communication ~~unit having~~ device on the network connected to by said connection unit has the predetermined data processing function based on a response signal that the ~~determined~~ wireless communication ~~unit~~ device on the network connected to by said connection unit has transmitted in response to the search request signal transmitted by said transmission unit;

a display unit adapted to selectably display information associated with the wireless communication unit determined by said determination unit to have the predetermined data processing function specified by the operator so as to enable identification of a wireless communication partner; and

a control unit adapted to, when ~~a user~~ the operator selects the information displayed by said display unit, while said detection unit is performing a detection process to detect the beacon, terminate the detection process of said detection unit, and execute connection processing with a wireless communication device specified by the selected information.

3. (currently amended) The device according to claim 2, wherein ~~said transmission unit connects the network identified by the network identification information included in the beacon detected by said detection unit and transmits the search request information to the network, and~~ said determination unit stores in a memory identification information of a wireless communication ~~unit~~ device on a partner side included in a response signal to the search request ~~information~~ signal upon reception of the response signal, and said display unit selectably displays the identification information stored in the memory.

4. (previously presented) The device according to claim 2, wherein each of the wireless communication device and the wireless communication partner comprises one of an image sensing device, a device for executing a print process of a sensed image, and a storage device for executing a storage process of a sensed image.

5. (canceled)

6. (previously presented) The device according to claim 2, wherein, when no signal is received in response to the search request signal within a predetermined period of time, an error display is made.

7. (currently amended) The device according to claim 2, further comprising:
a second determination means for determining unit adapted to determine if the beacon detected by said detection ~~means~~ unit is a beacon in an adhoc communication mode or a beacon in an infrastructure communication mode, and,

when said second determination means unit determines that the detected beacon is the beacon in the adhoc communication mode, said ~~search means~~ transmission unit transmits the search request information signal toward a wireless communication processing device as a generation source of the detected beacon, and,

when said second determination means unit determines that the detected beacon is the beacon in the infrastructure mode, said ~~search means~~ transmission unit transmits the search request information signal ~~of a wireless communication processing device~~ toward an access point.

8. (currently amended) The device according to claim 2, further comprising registration ~~means for registering~~ unit adapted to register, in a memory, information associated

with a connection to the partner wireless communication device, to which a wireless communication has been established.

9. (currently amended) The device according to claim 8, further comprising a mode for executing a process for establishing a wireless communication on the basis of the information registered by said registration ~~means~~ unit.

10. (currently amended) A wireless communication device that is configured to switch between a history search mode and a new search mode, and executes a communication process in each mode, wherein, in the history search mode, the wireless communication device communicates with a partner wireless communication device that had been communicated with previously, and wherein, in the new search mode, the wireless communication device communicates with a newly searched for partner wireless communication device, comprising:

a storage unit adapted to store device identification information and network identification information of a partner to which the wireless communication device has been connected previously;

an instruction unit adapted to instruct one of ~~[[a]]~~ the history search mode ~~that communicates with a desired partner wireless communication device based on the information stored in said storage unit, and a~~ and the new search mode ~~that searches for a new partner wireless communication device via a wireless communication, and communicates with the new partner wireless communication device;~~

a beacon detection unit that operates ~~adapted to, when said instruction unit instructs~~ in the new search mode~~[[,]]~~ and that detect detects a beacon;

a search unit adapted to, in the history search mode, compare network identification information included in the detected beacon with the network identification information stored in said storage unit, ~~[[make]]~~ cause said detection unit to detect another

beacon, if there is a match in the compared network identification information, and search for a partner wireless communication device to communicate with based on new network identification information, if the new network identification information is detected;

a first display unit adapted to, in the new search mode, selectably display device identification information of a wireless communication ~~unit~~ device found by said search unit;

a second display unit adapted to, ~~when said instruction unit instructs the history search mode~~, selectably display the device identification information of a wireless communication ~~unit~~ device stored in said storage unit in response to said instruction unit instructing the history search mode; and

a wireless communication establishment process unit adapted to, when device identification information displayed by one of said first and second display units is selected, execute a wireless communication establishment process with the wireless communication ~~unit~~ device specified by the selected device identification information.

11. (currently amended) A wireless communication system ~~having~~ comprising first and second wireless communication devices, wherein

said first wireless communication device comprises:

a discrimination unit adapted to discriminate a type of device capable of executing a processing function designated by an operator;

a determination unit adapted to, when receiving a beacon transmitted ~~by~~ from a device on a wireless network, determine whether device identification information corresponding to the type discriminated by said discrimination unit is included in the received beacon; and

a display unit adapted to, ~~if said determination unit determines that the device identification information corresponding to the type discriminated by said discrimination unit is~~

~~included in the received beacon~~, selectably display information associated with the device that transmitted the beacon, in accordance with a determination result determined by said determination unit, and

said second wireless communication device comprises:

an informing unit adapted to include device identification information indicating a function into a beacon and transmitting the beacon to the wireless network, and

when information of said second wireless communication device among information displayed by said display unit is selected, a process for establishing a communication between said first and second wireless communication devices is executed.

12. (currently amended) A wireless communication device comprising:

a discrimination unit adapted to discriminate a type of device capable of executing a processing function designated by an operator;

a determination unit adapted to, when receiving a beacon transmitted ~~by~~ from a device on a wireless network, determine whether device identification information corresponding to the type discriminated by said discrimination unit is included in the received beacon; and

a display unit adapted to, ~~if said determination unit determines that the device identification information corresponding to the type discriminated by said discrimination unit is included in the received beacon~~, selectably display information associated with the device that transmitted the beacon, in accordance with a determination result determined by said determination unit.

13. (currently amended) A method performed by a wireless communication device, the method comprising:

a detection step of detecting a plurality of beacons at a plurality of frequencies;

a connection step of connecting to a network identified by network identification information included in a beacon detected in said detection step so as to search for a wireless communication device having a predetermined data processing function specified by an operator;

a transmission step of transmitting a search request signal, to search for the wireless communication device having the predetermined data processing function specified by the operator, to a wireless communication unit device that are present on [[a]] the network connected to in said connection step identified by network identification information included in a beacon detected in said detection step, so as to search for a wireless communication unit having a predetermined data processing function;

a determination step of determining [[a]] whether the wireless communication ~~unit~~ device on the network connected to in said connection step ~~having~~ has the predetermined data processing function based on a response signal that the ~~determined~~ wireless communication ~~unit~~ device on the network connected to in said connection step has transmitted in response to the search request signal transmitted in said transmission step;

a display step of selectably displaying information associated with the wireless communication ~~unit~~ device determined in the determination step to have the predetermined data processing function specified by the operator so as to enable identification of a wireless communication partner; and

a control step of, when ~~a user~~ the operator selects the information displayed in said display step, while a detection process is being performed in said detection step to detect the

beacon, terminating the detection process in said detection step and executing connection processing with a wireless communication device specified by the selected information.

14. (currently amended) A method performed by a wireless communication device, which has ~~having~~ a memory for storing device information and network identification information of a partner wireless communication device that has been connected to previously, which is configured to switch between a history search mode and a new search mode, and which executes a communication process in each mode, wherein, in the history search mode, the wireless communication device communicates with a partner wireless communication device whose device information is stored in the memory, and wherein, in the new search mode, the wireless communication device communicates with a newly searched for partner wireless communication device, the method comprising:

a determination step of determining an operator's instruction that instructs one of ~~[[a]]~~ the history search mode ~~that communicates with a desired partner wireless communication device based on the information stored in the memory,~~ and ~~[[a]]~~ the new search mode ~~that searches for a new partner wireless communication device via a wireless communication, and communicates with the new partner wireless communication device;~~

a search step of executing, ~~when the operator instructs~~ in the new search mode, a beacon detection process, comparing network identification information included in the detected beacon with the network identification information stored in the memory, continuing a detection process of another beacon, if there is a match in the compared network identification information, and searching for a partner wireless communication device to communicate with

based on new network identification information, if the new network identification information is detected;

a first display step of, in the new search mode, selectably displaying device identification information of a wireless communication ~~unit~~ device found in ~~[[the]]~~ said search step on a display unit;

a second display step of selectably displaying, ~~when the operator instructs the history search mode~~, the device identification information of a wireless communication ~~unit~~ device stored in the memory on the display unit, in response to a determination in the determination step that the operator has instructed the history search mode; and

a wireless communication establishment process step of executing, when device identification information displayed in one of the first and second display steps is selected, a wireless communication establishment process with the wireless communication ~~unit~~ device specified by the selected device identification information.

15. (currently amended) A method performed by a wireless communication device, the method comprising:

a discrimination step of discriminating a type of device capable of executing a processing function designated by an operator;

a determination step of, when receiving a beacon transmitted by a device on a network, determining whether device identification information corresponding to the type discriminated in said discrimination step is included in the received beacon; and

a display step of, ~~if it is determined in said determination step that the device identification information corresponding to the type discriminated in said discrimination step is~~

~~included in the received beacon~~, selectably displaying information associated with the device that transmitted the beacon, in accordance with a determination result determined in said determination step.

16. (previously presented) The device according to claim 2, wherein said predetermined data processing function includes at least one of a data printing function and a data saving function.